UR 0244

Acc. Nr: AP0044151

PRIMARY SOURCE:

Voprosy Pitaniya,

1970, Vol 29, Nr 1,

pp 56-61

IDENTIFICATION AND QUANTIFICATION OF SOME
DIALKYLDITHIOCARBAMATES AND THEIR METABOLITES IN DIFFERENT
MEDIA OF VEGETABLE AND ANIMAL ORIGIN

Vekshteyn, M. Sh.; Klisenko, M. A.

Summary

A specific and sensitive methods for determination of dialkyldithiocarbamates (cyram, TMDT) and their metabolites (dimethylamine salt of dimethyldithiocarbamic acid, tetramethylthio-urea, sulfur), present simultaneously, is proposed. The procedure reposes upon chromatographic partition of the said compounds in a thin layer of aluminum oxide and in their quantification through ultra-violet spectroscopy. It is suitable for measuring residual amounts of the compounds in food stuffs and also in studying the dynamics and metabolism of these substances in various biological objects.

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PROCESSING DATE--230CT70

TITLE-HEPTACHLOR METABOLISM IN THE BODY -U-

AUTHOR-(03)-GIRENKO, D.B., KURCHA, G.V., KLISENKO, M.A.

COUNTRY OF INFO--USSR

SOURCE-GIGIYENA I SANITARIYA, 1970, NR 6, PP 19-22

DATE PUBLISHED----70

SUBJECT AREAS-BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--PESTICIDE, CHLORINATED DRGANIC COMPOUND, METABOLISM, HUMAN PHYSIOLOGY/(U)HEPTACHLOR PESTICIDE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED PROXY REEL/FRAME--3001/0828

STEP NO--UR/0240/70/000/006/0019/0022

CIRC ACCESSION NO--APO126505

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R001401410003-7"

PROCESSING DATE--230CT70 UNCLASSIFIED 033 2/2 CIRC ACCESSION NO--AP0126505 ABSTRACT. HEPTACHLOR PROVED TO ACCUMULATE IN ABSTRACT/EXTRACT--(U) GP-0-THE TISSUES OF INTERNAL ORGANS (FATTY TISSUES) AND TO BE ELIMINATED FROM THE BODY IN FECES BOTH IN ITS UNALTERED FORM AND IN THE FORM OF METABOLITE 1 AND 2 OF HEPTACHLOR EPOXY. THE NETABOLITE 1 MAY AS WELL CHANGE TO THE HEPTACHLOR EPOXY FORM. THE DATA OBTAINED ARE IMPORTANT FOR INVESTIGATING THE PROBLEM OF ACCUMULATION, DISTIRBUTION AND ELIMINATION OF CHLORORGANIC PESTICIDES FROM THE BODY. FACILITY: VSESOYUZNYY NAUCHNO-ISSLEDOVATEL SKIY INSTITUT GIGIYENY TOKSIKOLOGU PESTITSIDOV, POLIMERNYKH PLASTICHESKIKH MASS, KIYEV. UNCLASSIFIED

UDC 537.312.62(539.893)

RABIN'KIN, A. G., KLISHANOVA, L. A., and PRONINA, L. N.

"Influence of High Pressure Treatment on Phase Composition and Superconducting Properties of Zirconium-Niobium Alloys"

Problemy Sverkhprovodyashchikh Materialov [Problems of Superconducting Materials -- Collection of Works], Moscow, Nauka Press, 1970, pp 141-147

Translation: Results are presented from a study of the transition temperature, critical fields and phase composition of alloys of zirconium with 2-40 at. No after they are subjected to high hydrostatic pressure (35-65 kbar).

It is demonstrated that, as for pure Zr, the application of high pressure results in formation of an ω phase in the alloys with 2-30 at.% Nb, whereas annealing fixes the ω phase only in alloys with 7-10 at.% Nb. The high pressure ω phase formed is retained in the specimens after pressure removal, its quantity being significantly increased in alloys with 7-10 at.% Nb. Alloying of Zr with niobium decreases the pressure at which the ω phase develops in comparison to pure Zr. In all cases, the formation of the high pressure ω phase or the increase in its quantity causes a reduction in T_c , an expansion of the temperature

interval over which the transition to the superconducting state occurs, and a decrease in the value of H_{c2}.

1 figure; 1 table; 9 biblio. refs.

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Comparison Co	Acc. Nr APO03	6334 CHE	ervice: . 4-70	Ref. Cod	le 8 4	
1 18 Li		seams. Klochkov, A. i.; P.; Koval, A. B.; Gribanova, V. Chelyabinsk. USSR). I (Russ). The corrosion resion of the welding process approximate of the seam. For more for sulfate plants the followare welding the A-type electric corrections of the preferentially use current intensity is 110 A for rod of 1Kh18N9T steel (Cliff). Ni 8-9.5, Ti (Cliff)	Imel'yanova, V. P.; D. V. L. F.; Grigor ev. N. V. (Chelyabinsk, P. Coirs Khim. 1979) stance of welds dependent on the electrode dail, thermal treatment in, corrosion in connectwing procedure is recovered (C 0.11, Mn 0.10, Mo 1.7-1.5, S 0.02 ed with Mo as additived the welding in Ar at 1.5 (0.12, Mn 1-2, S 0.02) × 5-0.7, S	obrovolskii, I. P.; Fishera litekh. Inst. (1), 50-2 is on the type type, on the t, and on the tions and app. mmended: in 9-1.5, Si 0.6- and P 0.03%) e. The max. h. with addnl. is \(\le 0.80, \) Cr is 0.02, P \(\le \)		
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USSR

UDC 616.932+616.932-008.97]-07:616.153.1

KLISHIN V. Astrakhan Medical Institute

"Serum Lysozyme Activity in El Tor Cholera Patients and Vibrio Carriers"

Moscow, Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii, No 10, 1972, pp 52-54

Abstract: In 49 El Tor cholera patients, serum lysozyme activity decreased during the acute phase of the disease regardless of its clinical form. In the convalescent stage (weeks 2 to 3 and later), it increased to the normal level and 2 to 3 months after recovery it was even slightly above normal. Four to 5 weeks after recovery, lysozyme activity again decreased in most patients to the normal or even subnormal level. Examination of 60 vibrio carriers during the first month after detection of the pathogen showed lysozyme activity to be fluctuating at lower normal limits, but 2 to 3 months after treatment it rose, slightly exceeding the normal level.

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APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R001401410003-7"

UDC 531.7+621.317

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VEDERNIKOV, V. M., KIR'YANOV, V. P., KLISTORIN, I. F., and KOKSHAROV, M. A.

"Principles of the Construction of Computing Devices in Laser Displacement Meters"

Novosibirsk, Avtometriya, No 3, 1973, pp 46-52

Abstract: The laser displacement meter is defined as consisting of two units — a laser interferometer with photoelectric converters, and a computing unit — and is used to determine dimensions, displacements, velocities, and other physical quantities. The purpose of this paper is to examine the basic principles in the construction of the computer unit in this instrument, analyze its characteristics, and determine the most typical of its areas of applicability. The analysis begins with a discussion of the basic problem in the design of this unit, which is the conversion of the interferometer's output signals into digital form, involving also the representation of the measurement results in an acceptable system of units and the introduction of corrections for the deviations from the normal measurement conditions. The basic structural set—uo of the computer unit and the way it realizes its operations are also concerned.

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- 81 -

UDC: 621.317.7

YEFANOV, V. M., KLISTORIN, I. F., Novosibirsk

"Method and Device for Measuring the Noise of Microcircuits"

Novosibirsk, Avtometriya, No 4, Jul/Aug 71, pp 109-115

Abstract: The paper describes a principle of measurement of the effective noise at the input of a microcircuit. This principle can be used as a basis for instruments to measure noise in the audio and sub-audio ranges with accuracy and sensitivity comparable to those of instruments based on the zero-modulation and correlation methods. The actual noise-measuring instrument is an enalog-digital converter with readout device. A block diagram of the device is given and its operation is described as well as the sequence to be followed in measurements. The finished instrument is made with microcircuits and is designed so that it can be used either as a laboratory instrument or as a component of an information measurement system. The device has a dynamic measurement range of 0.1-99 µV in three subranges and an effective passband of 100-1000 Hz. Measurement time is less than 10 s. With a slight modification of the input circuitry, the instrument can be used for measuring the internal noises of individual transistors. Three figures, bibliography of nine titles.

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UDC 621.375.127.3(088.8)

BELOV, V. H., KLISTORIN, I. F., PODZIN, A. YE. BUROVISEV, V. A.

"Two-Stage Emitter Repeater"

USSR Author's Certificate No 301816, filed 20 Oct 1969, published 8 Jun 1971 (from RZh-Radiotekhnika, No 1, 1972, Abstract No 1D245P)

Translation: A two-stage emitter repeater made of transistors of different types of conductivity with a current-stabilizing transistor in the emitter circuit of the transistor of each cascade is proposed. The proposed repeater is distinguished by the fact that in order to decrease the input capacitance and increase the input impedance the collector of the transistor of the first cascade is connected to the collector of the current-stabilizing transistor of the second cascade connected through the parallel-connected resistor and capacitor (or stabilitron) to the emitter of the transistor of the second cascade.

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APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R001401410003-7"

UDC: 681.325

USSR

KLISTORIN, I. F., SHCHERBACHENKO, A. M., Siberian Department of the Institute of Automation and Electrometry, Academy of Sciences of the USSR

"A Converter for Changing Low and Very Low Frequencies to Digital Code"

Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obraztsy, Tovarnyye Znaki, No 24, 1970, Soviet Patent No 277415, Class 42, Filed 22 April 1969, p 134

Abstract: This Author's Certificate introduces a converter which changes low and very low frequencies to digital code. The converter contains pulse-potential diodes connected to an OR logic circuit, and a unit for isolating the period of the frequency to be converted. This unit is connected through a key the input of which is connected to the standard frequency oscillator, with the input of the first counter and the "unit" input of the time conversion flip-flop. The output of the conversion time flip-flop is connected to a second key through which the cadence pulse oscillator is connected to the second counter. The converter also contains a third counter in which the output for the most significant digit is connected to the reset terminal of the conversion time flip-flop. As a distinguishing feature of the patent, the conversion range is extended and the device is simplified by connecting 1/2

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KLISTORIN, I. F., SHCHERBACHENKO, A. M., Otkrytiya, Izobreteniya, Promyshlennyye Obraztsy, Tovarnyye Znaki, No 24, 1970, Soviet Patent No 277415, Class 42, Filed 22 April 1969, p 134

the input of the third counter directly to the input of the OR logic circuit, and by connecting the output for each i-th digital place (where $i=1,\ldots,n$) in the first counter to the potential input of the i-th diode, the pulse input of this diode being connected to the output of the (n+1-i)-th digital place of the second counter.

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APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R001401410003-7"

UDC 621.317.76.029.4

KLISTORIN, I.F., SHCHERBACHENKO, A. M. of Novosibirsk

"A Fast Acting Digital Frequency Meter for Low and Sub-low Frequencies"

Novosibirsk, Avtometriya, No 2, 1970 pp 73-78

Abstract: Instruments of this type produce a frequency removal by measuring the duration of the input signal over one cycle and converting this to a frequency. There are various conversion techniques, but the simplest is repetitive subtraction of the high order bits of the duration value from an arbitrary value which is adjusted during the course of the calculation.

This article describes a frequency code converter on the basis of a digital integrator with sequential carry, applicable also to rapid action frequency meters for low and super low frequencies. This circuit consists essentially of a frequency divider and a digital register, holding the value of the function to be integrated, connected by a group of impulse potential gates, and a counter connected with the outputs of the gates through the logical or circuit. The circuit illustrated has three major components: a cycle length detection circuit which produces two signals, one lasting for one cycle of the input signal and the other occurring at the termination of this cycle; a duration counting circuit, containing an impulse potential switch, a standard frequency generator, and an impulse counter; a computational

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R001401410003-7"

USSR

KLISTORIN, I. F., et al, Novosibirsk, Avtonetriya, No 2, 1970 pp 73-78

circuit, containing a cyclic frequency generator, an impulse potential switch, a counter which holds an initial standard value, and a logical or circuit. The operation of these elements is described in some detail.

It is also pointed out that the time for calculating frequency can be reduced significantly, not only by increasing the cyclic frequency, but also by taking account of boundaries on the permissible frequency range. This is demonstrated mathematically, showing that if the ratio between maximum and minimum permissible frequencies is 10 to 1, the calculation time can be reduced by 10%.

The instrument error is essentially the error of cycle duration determination, since the error in conversion can be reduced to the desirable level by increasing the number of positions in the counters.

The example given is a binary-decimal frequency -- code converter, operating in a frequency band where the maximum is 9999 times the minimum, with a conversion error of 0.1%. This instrument requires four positions in the initial digital register and frequency converter registers, and three positions in the counter for a standard number of impulses. At a cyclic 2/3

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KLISTORIN, I. F., et al, Novosibirsk, Avtometriya, No 2, 1970, pp 73-78
frequency of 1 megahertz, the maximum computation time does not exceed 10 milliseconds.

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CIA-RDP86-00513R001401410003-7

Acc. Nr: #P0049801_

Abstracting Service: CHEMICAL ABST. 5-70

Ref. Code:

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in control tests. Klitenik, G. S.; Yamova, L. P. (Sverdlovsk, Filial Nauch Issled, 1981). Representation of the statistical and the actual field performance. The statistical anal. of the testing results showed that 409,000 double bending cycles is sufficient to det, whether a batch of tracks can last 10,000 km in service.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-

CIA-RDP86-00513R001401410003-7

PROCESSING DATE--020CT70

1/2 018 UNCLASSIFIED TITLE--DUMAIN STRUCTURE OF SBSI CRYSTALS -U-

AUTHOR-(02)-KLIYA. M.D., LYAKHUVITSKAYA, V.A.

COUNTRY OF INFO--USSR

SOURCE--KRISTALLOGRAFIYA 1970, 15(1), 75-7

DATE PUBLISHED----70

SUBJECT AREAS--PHYSICS, MATERIALS

TOPIC TAGS--SEMICONDUCTOR MATERIAL, ANTOMONY SULFIDE, IODIDE, ETCHED CRYSTAL, PHASE TRANSFORMATION, MAGNETIC DOMAIN STRUCTURE

CONTROL MARKING-NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED PROXY REEL/FRAME--1989/0755

STEP NO--UR/0070/70/015/001/0075/0077

CIRC ACCESSION NO--AP0107297

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R001401410003-7"

PROCESSING DATE--020CT70 UNCLASSIFIED 2/2 018 CIRC ACCESSION NO--APO107297 ABSTRACT. THE STRUCTURE OF SEMICONDUCTOR ABSTRACT/EXTRACT--(U) GP-0-FERRUELECS. WAS STUDIED BY USING THE METHOD OF SBI SUB3 SELECTIVE CRYSTN. TO OBSERVE THE MICRORELIEF OF CRYSTALLOGRAPHIC EDGES AS WELL AS BY USING THE CLASSICAL ETCHING METHOD. THESE METHODS CAN ALSO BE USED TO DETECT THE CHARACTERISTIC FEATURES OF THE DOMAIN STRUCTURE ON NONFERROELEC. CROSS SECTIONS. AS A RESULT OF A PHASE TRANSFORMATION OF CRYSTALS OF SBST (22-25DEGREES), EQUIV. TO THE CHANGE OF SYMMETRY MMH YIELDS TO MM SUB2, THE OCCURRENCE WAS MOTED OF INTERFACES OF THE (HKD) TYPE WITH A ZERO CHARGE AS WELL AS INTERFACES OF THE (101) TYPE NOT ENCOUNTERED IN DIELEC. FERROELECS. THE DIPOLE CHARGE OF THESE SURFACES HAS COMPENSATED FOR BY THE FREE CURRENT CARRIERS.

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UDC 621.43.011:533+621.5:533

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KLIYENTOV, N. V.

"Semi-Empirical Theory for Calculating a Plane Turbulent Jet Moving Along a Solid Wall"

Tr. Kuybyshev. aviats. in-t (Works of Kuybyshev Aviation Institute), 1971, No. 35, pp 68-75 (from RZh-Mekhanika, No 8, Aug 72, Abstract No 8B495)

Translation: A semi-empirical method is proposed for calculating the characteristics of the propagation of a plane turbulent jet of incompressible fluid flowing from a slit source and moving along a semi-infinite plate. The equations of turbulent motion in a boundary layer are used. The internal and external region and three segments of the jet (initial, transitional, and basic) are discussed. Empirical formulas for the tangential stress and the velocity profile are used in calculating the characteristics of the inner region in the basic segment. Computational formulas for the basic segment of the jet are obtained after using the equations for momentum. Similar calculations were also carried out for the transition region of the jet. Results computed on the basis of these formulas are compared with experimental data. The thermal problem is considered and formulas for Nusselt number are obtained. 8 ref. Yu. F. Dityakin.

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1/2 039 UNCLASSIFIED PROCESSING DATE--18SEP70
FITLE--PHYSICAL PROPERTIES OF NITROGEN CONTAINING SYNTHETIC DIAMONDS -U-

AUTHOR-(03)-NIKITIN, A.V., KLIYENTOVA, G.P., BEZRUKOV, G.N.

COUNTRY OF INFO--USSR

SOURCE--IZY. AKAD. NAUK SSSR, NEORG. MATER, 1970, 6(2) 379-1

DATE PUBLISHED ---- 70

SUBJECT AREAS--PHYSICS, EARTH SCIENCES AND OCEANOGRAPHY, CHEMISTRY

TOPIC TAGS--PHYSICAL CHEMISTRY PROPERTY, NITROGEN, DIAMOND, CHEMICAL SYNTHESIS, X RAY DIFFRACTION ANALYSIS, CRYSTAL LATTICE STRUCTURE, CRYSTAL IMPURITY, ALUMINUM, BORON, LUMINESCENCE, THERMO EFFECT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED PROXY REEL/FRAME--1988/0547

STEP NO--UR/0363/70/006/002/0370/0371

CIRC ACCESSION NO--APO105532

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R001401410003-7"

PROCESSING DATE--18SEP70 UNCLASSIFIED 2/2 039 CIRC ACCESSION NO--APO105532 STRACT/EXTRACT--(U) GP-O- ABSTRACT. DATA ARE PRESENTED CONCERNING CERTAIN PHYS. PROPERTIES OF SYNTHETIC DIAMONDS SYNTHESIZED IN A MEDIUM ABSTRACT/EXTRACT--(U) GP-0-OF EXCESS N SUBZ. LAUE AND POWDER X RAY DIFFRACTION METHODS WERE USED TO STUDY THE CRYSTALS PREPD. THE LATTICE PARAMETER OF THE DOPED CRYSTALS WAS ALPHA EQUAL 3.5680 ANGSTROM, WHICH DIFFERS SOMEWHAT FROM THAT FOUND BY OTHER INVESTIGATORS AND FOR OTHER SYNTHETIC DIAMOND CRYSTALS. THERMOSCINTILLATION CURVES WERE ALSO TAKEN FOR THESE SAMPLES. AT 20-400DEGREES, THE HEATING RATE BEING IDEGREE-SEC. THE PREVIOUS ASSUMPTION THAT N TAKES PART IN THE FORMATION OF DEFECTS RESPONSIBLE FOR THERMOSCINTILLATION HAS BEEN CONFIRMED. THREE VERY INTENSE AND HIGHLY DISCERNIBLE PEAKS WERE OBSD., AT 100-115, 150, AND 260DEGREES, WITH A 4TH MAX. AT 215DEGREES. THE CALCO. ACTIVATION ENERGIES FOR THESE WERE 0.37, 0.53, 0.61, AND 0.84 EV, RESP. INTRODUCTING B AND AL IMPURITIES INTO THE DIAMOND LATTICE UNDER CERTAIN CONDITIONS ALSO INCREASES THE INTENSITY OF THE CORRESPONDING THERMOLUMINESCENCE PEAKS.

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UDC: 546.26--162

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HIKITIN, A. V., KLIYENTOVA, G. P., and BEZRUKOV, G. N., All-Union Scientific Research Institute for the Synthesis of Mineral Ore

"Certain Physical Properties of Nitrogen-Doped Artificial Diamonds"

Moscow, Reorganicheskiye Materialy, Vol 6, No 2, Feb 70, pp 370-371

Abstract: Despite its scientific and practical importance, there is relatively little information on the effect of nitrogen on the properties of artificial diamonds. This paper presents preliminary data on some of the properties of man-made diamonds synthesized in a nitrogen-rich medium. The specimens were synthesized by the widely employed method of high temperatures and pressures. Nitrogen was added to carbon dissolving metals in amounts of 5 to 20% in the form of Mann synthesized for this purpose by a conventional method. The diamond crystals obtained in this manner actually contained higher concentrations of the nitrogen impurity (by two or three orders of magnitude). Their color was densely-green (transparent crystals) and black (non-transparent crystals). About 20% of the crystals with the added nitrogen impurity were twins. Use was made of Laue diffraction patterns and the powder method to analyze the crystals. Extrareflections were observed in the green crystals, an anomaly related to crystal lattice defects caused by foreign atoms, particularly nitrogen and metal carbides. A

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NIKITIN, A. V., et al., Neorganicheskiye Materialy, Vol 6, No 3, Feb 70, pp 370-371

thermoluminescence curve shown in the original article indicates new peaks. Earlier research indicates an increased luminescence in artificial diamonds with addition of boron and aluminum. The physical and morphological characteristics of diamonds grown in a nitrogen medium are readily explained if the assumption is made of the formation of carbon compounds with Macnon-type metals. The formation and decomposition of such intermediate compounds considerably affect the kinetics of crystallization and properties of obtained crystals.

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USSR

BOBROVNIK, I. I., GORBUNOV, K. I., KLOCHAN, V. I., MONASTYREV, V. K., POPLAV-SKIY, N. N.

"Geoseismic Logging Procedure"

USSR Author's Certificate No 370567 (from Otkrytiya, Izobreteniya, Promyshlennyve obraztsy. Tovarnyve znaki (Discoveries, Inventions, Industrial Models, Trademarks), No 11, 1973, page 144)

Translation: The geoseismic logging procedure by reducing multichannel reflected wave recordings to one generalized track with utilization of mutual correlation functions, track selection by the threshold values of the similarity coefficients and summation with preliminary input of kinematic and static corrections is distinguished by the fact that in order to increase the reliability of wave correlation and determine the relations of the dynamic wave characteristics with physical-lithologic section parameters, two-halfperiod detection of the digital analog of the summogram, sliding integration with the time interval which is a multiple of the oscillation halfperiod and normalization of the recordings with respect to intensity of the excitation center and the amplification coefficients of the recording channel are used successively with subsequent conversion of the energograms by the law of formation of a sequence of partial sums of the theories.

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APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R001401410003-7"

UDC 621.373:530.145.6

USSR

KLOCHAN, YE. L., LANDA, P. S.

"Frequency Characteristics of a Ring Laser Considering Natural Fluctuations"

Gor'kiy, <u>Izvestiva vysshikh uchebnykh zavedeniy, Radiofizika</u>, Vol XIV, No 10, 1971, pp 1518-1525

Abstract: A study was made of the effect of natural fluctuations on the average beat frequency of the opposing waves in a ring laser as a function of the rotation rate under the assumption that the amplitude fluctuations are small. The phase fluctuations were studied by the Pokker-Planck equation method. The effect of natural fluctuations on the frequency characteristic depends on the generation power especially near the generation threshold.

In studying the problems of limiting sensitivity of a laser gyroscope [N. N. Rozanov, Optika i spektroskopiya, Vol 28, No 4, 740, 1970; P. S. Landa, Optika i spektroskopiya, Vol 29, No 5, 1971] it was demonstrated that the mean Optika i spektroskopiya, Vol 29, No 5, 1971] it was demonstrated that the mean Square deviation of the beat frequency as a function of the mean frequency characteristic decreases with an increase in observation time T as VD/T where D is the width of the beat signal line. Here, the mean frequency characteristics are calculated for a frequency difference on the order of and much larger than the synchronization band width. Equations are derived for the phase difference 1/2

USSR

KLOCHAN, YE. L., et al., <u>Izvestiya vysshikh uchebnykh zavedeniy</u>, <u>Radiofizika</u>, Vol XIV, No 10, 1971, pp 1518-1525

fluctuations, the frequency characteristic of the ring laser near the synchronization band and the frequency characteristic far from the synchronization region.

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36 -

USSR UDC: 550.838

IEBEDEV, N. N., GRIGOR'YEV, V. M., KTOCHEK, N. W. KOBANOV, N. I., Siberian Institute of Terrestrial Magnetism, the longsphere and Prepagation of Radio Waves, Siberian Department of the Academy of Sciences of the USSR

"A Method of Measuring Magnetic Field Strength"

Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obraztsy, Tovarnyye Znaki, No 13, May 72, Author's Certificate No 335652, Division G, filed 17 Aug 70, published 11 Apr 72, p 196

Translation: This Author's Certificate introduces a method of measuring magnetic field strength in accordance with Zeeman splitting of a spectral line. As a distinguishing feature of the patent, precision is improved by converting the left-hand and right-hand circularly polarized components of Zeeman splitting to linearly polarized components, spatially modulating the relative position of the components in the direction of dispersion, and measuring the oscillations of the light flux which are proportional to magnetic field strength.

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USSR

UDC 519.2

GIORGADZE, A. KH., KLOCHKO, A. V.

"Expandability of Stochastic Matrices into Elementary Matrices"

Soobshch. AN GruzSSR (Reports of the Georgian SSR Academy of Sciences), 1972, Vol 67, No 3, pp 561-563 (from RZh-Kibernetika, No 12, Dec 72, Abstract No 12V47)

Translation: Asymptotic lower and upper bounds were found for the number of elementary matrices on expansion of a stochastic matrix. The result is valid for the class of stochastic matrices with efficient transition probabilities for different asymptotic relations of the parameters characterizing the investigated class.

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APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R001401410003-7"

Pathology

USSR

UDC: 577.3

KLOCHKO, E.V., KOVAL'CHUK, L.V., KRUGLYAKOVA, K.YE., SEYTS, I.F., ILIGANOVA, I. B., BLINOV, M.N., and EMANUEL', N.M., Academician, Institute of Chemical Physics, Academy of Sciences USSR

"Free Radicals and Metabolism in Leukocytes During Leukoses"

Moscow, Doklady Akademii Nauk, Vol 190, No 2, 1970, pp 176-179

Abstract: The content of free radicals in leukocytes from chronic lymphatic leukosis and chronic myeloid leukosis patients was studied after the cells were incubated with various metabolic poisons - monobromoacetate, sodium fluoride, 2,4-dinitriphenol, and oligomycin. The concentration of free radicals decreased by 50% after "leukemic" leukocytes were exposed to 2,4-dinitrophenol, an uncoupler of oxidative phosphorylation in the early stages. The use of oligomycin, an uncoupler of oxidative phosphorylation in the later stages, did not have an appreciable effect on the level of free radicals. The incubation of healthy leukocytes with 2,4-dimitrophenol or oligomycin likewise had no effect on the concentration of free radicals. The level of free radicals in the leukocytes of both leukotic patients and healthy persons was not affected either during inhibition of glycolysis with sodium fluoride or stimulation during anaerobiosis. Monobromoacetate, which blocks glycolysis, had a more pronounced effect. It would appear that the high content of free radicals in leukocytes during leukosis signifies a disturbance of oxidative phosphorylation.

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R001401410003-7"

UNCLASSIFIED PROCESSING DATE--11SEP70 1/2 024 TITLE-FREE RADICALS AND ENERGY EXCHANGE IN LEUKUCYTES DURING LEUKOSES -U- /

AUTHOR-KLOCHKO, E., KOVALCHUK, L., KRUGLYAKOVA, K., SEITS, I., LUGANOVA,

COUNTRY OF INFO--USSR

SOURCE--DOKL. AKAD. NAUK SSSR 1970, 190(2), 476-9

DATE PUBLISHED ---- 70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--LEUKOCYTE, EPR SPECTRUM, RESPIRATION, PHOSPHORYLATION, FREE RADICAL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED PROXY REEL/FRAME--1985/1800

STEP NO--UR/0020/70/190/002/0476/0479

CIRC ACCESSION NO--ATOLO1847

UNCLASSIFIED

	UNCLASSIFIED	PROCESSING DATE115EP70	
GIRC ACCESSION NOATO101847 ABSTRACT/EXTRACT(U) GP-0- WERE FOLLOWED BY EPR SPECTR INCREASED CONCN. OF FREE RA DISTURBED SYSTEM OF COUPLIN	A IN HUMAN LEUKOC) DICALS IN LEUKOSI	YTES DURING MEUKOSES. AN	
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Acc. Nr 19036334 Abstracting Service: Ref. Code 20. Ook 8

| Chemical Abst. 4-70 | Chem

UDC 612.822.3

KLOCHKOV, A. M., Moscow

"A Reciprocal Spectral Analysis of Brain Biopotentials During Electrical Stimulation of Subcortical Centers"

Moscow, Zhurnal Vysshey Nervnoy Deyatel nosti imeni I. P. Pavlov, Vol 23, Vyp 4, Jul/Aug 73, pp 845-854

Abstract: A spectral representation of the EEG intercorrelation function was used to study the characteristics of the intercentral relationships of the brains of two rabbits under normal conditions and on electrical stimulation of subcortical centers. Spectra were recorded for the lateral genicution of subcortical centers. Spectra were during and after stimulation of late body (LGB) and the visual cortical area during and after stimulation of the LGB or the candate nucleus, and for the visual and motor cortical areas under LGB stimulation. Stimulation of the LGB produced stronger and longer lasting disturbances of the LGB and visual cortex interrelationships than lasting disturbances of the LGB and visual cortex interrelationships were stimulation of the n. caudatus. The visual and motor interrelationships were more weakly disturbed, but took longer to recover. These results are said to show that the nature of the disturbance depends on the functional closeness 1/2

- 69 -

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R001401410003-7"

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KLOCHKOV, A. M., Zhurnal Vysshey Nervncy Devatel nosti imeni I. P. Pavlov, Vol 23, Vyp 4, Jul/Aug 73, pp 845-854

of the stimulated point to the pair of centers under investigation, while the process of recovery depends on the functional closeness of the pair of centers whose interaction is considered. Various effects of repeated stimulation after recovery were noted.

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APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R001401410003-7"

20 March 1987 -

USSR

UDC: 662.5B1

KIOCHKOV, I. S. and MANACHINSKIY, N. D., Moscow

"The Ignition of Hexogen by Heated Wires at Pressures of 1000-1300 kg/cm2"

Novosibirsk, Fizika Goreniya i Vzryva, Vol 9, No 4, Jul-Aug 73, pp 510-515

Abstract: The authors present the results from studying the effect of pressure (up to 13000 kg/cm²) on the ignition of hexogen by heat fluxes which are set up by thin (20-70 microns) incadescent wires. The energy and temperature of hexogen combustion were determined with respect to the energy of the condenser whose discharge was used to heat the wire inside the explosive and with respect to combustion lag time which was measured from the moment of circuit closing to the formation of a zone of ionized combustion products along the wire. The results of the experiment are compared to combustion energy values which were calculated with respect to the phenomenological theory for the case of "minimal" ignition. A formula is derived on the basis of the experimental results which makes it possible to estimate the energy of combustion up to relatively high pressures. It is also shown that the temperature and combustion lag time values decrease as pressure increases.

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The exement of the publications have been trailered as presented in the original for elements of any statements exertained forter. This trailation is published as preparation for their to expedite the discommission of information. Approved for public referse. Distribution unlimited.	BRAPHICS NOT REPRODUCIBLE This translation was accomplished from a zerox aver not reproducible. An attempt to obtain the negative feemile. Thus, this document was publicable on a timely basis. NOTICE	AUTHOR: 1. S. KLOCHKOY, at at LANGUAGE. KUSSIAN	ENGLISH TITLE: SHOCK SENSITIVITY OF SOLID EXCLOSIVE THE CONSIDERATION OF EXPLOSION TRANSF SOURCE: FIZIKA CORENTA I VZRVA, VOL 5, NO	DEPARTMENT OF THE ARMY U.S. AND Y PURION SOLINGE AND TECHNOLOGY 223 ECUENTH STREET PR. CHARLOTTENVILLE VIRGINIA 12801 In Ruphy Refer to: FSTC-HT-23-123-72 DIA Taik No. 770-23-01
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UDC 621.891.22

KOVALICHENKO, M. S., TKACHENKO, Yu. G., YURCHENKO, D. Z., KLOCHKOV, L. A.,

Institute of Material Science Problems, Academy of Sciences, Ukrainian SSR, Kiev

"The Influence of Temperature on the State of the Surface Layer of Niobium Carbide During External Friction"

Kiev, Fiziko-Khimicheskaya Mekhanika Materialov, Vol 7, No 4, 1971, pp 45-48

Abstract: A study was made of the microhardness of the surface layer of niobium carbide after tests for friction and wear under conditions of high temperatures and a vacuum. These tests were made on samples of niobium carbide obtained by means of the pressing of powders with subsequent sintering. The composition of the samples was close to stoichiometric, the residual porosity comprised 10 to 12%. Some weakening was observed in the surface layer. As the temperature of the tests increases, the degree of weakening and the depth of the weakened layer increased. 2 figures. 1 table. 10 references.

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- 81 -

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R001401410003-7"

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UDC 621.791.053.6:669.715:621.771

CONTROL OF THE PROPERTY OF THE

KURKIN, S. A., Doctor of Technical Sciences, KLOCHKOV, N. A. and NIKOLAYEV, A. I., Engineers

"Rolling With Preliminary Heating of Butt Seams of AMg6M Alloy"

Moscow, Svarochnoye Proizvodstvo, No 11, Nov 70, pp 24-25

Abstract: Welded joints of AMg6M alloy are unsuitable for deep drawing or stamping due to tearing of the welded seam, resulting from the presence of a dendritic structure and large separations of the β -phase in the fusion zone. This problem can be eliminated by rolling seams in a roller with local heating, thus improving the properties of the metal in and around the welded seam. The increased homogeneity of the mechanical properties produced by rolling increases the reliability of these structures under biaxial extension conditions and allows parts of complex shape to be stamped from welded blanks.

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APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R001401410003-7"

USSR

UDC 539.234+539.26+621.416

GRIGOR'YEV, O. M., KLOCHKOV, V. P., KOSENKO, V. Ye., STADNIK, A. V., and SHCHETKIN, V. N.

"Preparing and Investigating Monocrystalline Silicon Films on Sapphire and MOS Transistors of That Type"

Kiev, Poluprovodnikovaya tekhnika i mikroelektronika, No. 6, 1971, pp 16-23

Abstract: As opposed to silicon films deposited on silicon, these films on sapphire permit substantial reductions in the parasitic capacitance of integrated circuits and have other benefits. This paper discusses some problems arising in connection with these devices, such as the effect of the state of the sapphire substrate on the silicon film, the mechanism for the formation of film defects, and the effect of such structural defects on the basic parameters of transistors made by this process. The specimens used in the experiments of the present paper were of the silicon on silicon and the silicon on sapphire type, with the deposition made in vacuum heating chambers of stainless steel. In one type of specimen the films were sputtered on the substrate in a vacuum of 1-3.

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GRIGOR'YEV, O. N., et al., Poluprovodníkovaya tekhnika i mikroelektronika, No 6, 1971, pp 16-23

 10^{-6} mm Hg without preliminary heating, and in a vacuum of $1\text{--}2\cdot10^{-7}$ mm Hg with preliminary heating. The authors assert that the specimens made by their method are in no way inferior to the best of those obtained by thermal decomposition of silance or the reduction of silicon galloids. They find also that silicon on sapphire transistors are at least as good as those of silicon on silicon. They are associated with the Semiconductor Institute of the Ukrainian Academy of Sciences.

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UDC 539.26+539.432

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KLOCHKOV. V. P., GRIGGR'YAV, O. N., FOLUDIN, V. I., SOLDATENKO, N. N., TORCHUN, N. M., and TKHCRIK, Yu. A.

"Preparing and Investigating Germanium-Silicon Heterosystems"

Kiev, Poluprovodnikovaya tekhnika i mikroelektronika, No. 6, 1971, pp 24-30

Abstract: Experiments are described for investigating the heteroepitaxial growth and quality of germanium films deposited on silicon substrates by a molecular beam in a vacuum. The results obtained by these experiments are compared with those found earlier in experiments with Ge-GaAs systems used as models of heterojunctions made of semiconductor pairs with very similar crystallographic parameters, such as Ge-GaAs, or very different parameters, such as Ge-Si. The method of diffraction of fast electrons in reflection and electron microscopy, as well as double crystal spectrometry and x-ray topographical pictures by the Berg-Earrett method are used. The temperature of the silicon substrates varied from 240 to 800° C and the condensation rate from 3 to 4000 % per The vacuum was maintained in the limits of 1 to $5 \cdot 10^{-5}$ mm Hg and the film thickness varied from tens of angstroms to tens of The authors are connected with the Semiconductor Institute, Ukrainian Academy of Sciences.

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APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R001401410003-7"

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UDC 539.26+539.234

KLOCHKOV V. P., GRIGOR'YEV, O. N., POLUDIN, V. I., SOLDATENKO, N. N., TORCHUN, N. M., TKHORIK, YU. A.

"Obtaining and Studying the Germanium-Silicon Heterosystem"

Kiev, Poluprovodnikovaya tekhnika i mikroelektronika, No 6, 1971, pp 24-30

Abstract: A study was made of the heteroepitaxial growth and degree of perfection of germanium films deposited from a molecular beam in a vacuum on substrates made of silicon. The previously obtained results for the Ge-GaAs system [A. P. Klimenko, et al., Protsessy rosta i struktura monokristallicheskikh slovev poluprovodnikov, Part 1, Nauka Press, Novosibirsk, 478, 1968] are presented for comparison. The indicated systems were used as models of heterojunctions in which the semiconductor pairs are either very close with respect to crystallographic parameters (Ge-GaAs) or these parameters are essentially different (Ge-Si). The crystal structure, mechanism of nucleation and growth and structural defects are studied. The mechanism of occurrence of twins in the germanium films on (100) silicon is discussed. On GaAs substrates in the initial stages of nucleation there is a tendency toward the formation of flat (platelike) nuclei, the tangential growth rate of which turns out to be appreciably higher than the normal growth rate. The germanium films have a 1/2

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KLOCHKOV, V. P., et al., <u>Poluprovodnikovaya tekhnika i mikroelektronika</u>, No 6, 1971, pp 24-30

mosaic structure. The data on the angles of disorientation of the films and substrates obtained from the corresponding rocking curves confirm the conclusions obtained from topographic studies: the film growing on the surface of the crystal is not only distorted itself, but it distorts the substrate.

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UDC 539.234+539.26+621.416

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GRIGOR'YEV, O. N., KLOCHKOV, V. P., KOSENKO, V. YE., STADNIK, A. V., SHCHETKIN, V. N.

"Obtaining and Studying Monocrystalline Films of Silicon on Sapphire and Metal-Oxide-Semiconductor Transistors Based on Them"

Kiev, Poluprovodnikovaya tekhnika i mikroelektronika, No 6, 1971, pp 16-23

Abstract: A study was made of the effect of the degree of perfection of sapphire substrates on the perfection of the silicon films, the mechanism of formation of a large number of defects in films and the effect of structural defects of the films on the primary parameters of instruments manufactured on the basis of them. Sublimation in a vacuum was used to obtain monocrystalline films of silicon on sapphire and silicon on silicon. The substrates and films were investigated by the methods of x-ray diffraction microscopy. Metal-oxide-semiconductor transistors with characteristics not inferior to the characteristics of analogous instruments made of massive silicon were manufactured from silicon films on sapphire. Topograms of the α-Λl₂0₃ substrate of 1012 orien-

tation taken by various methods are presented. A procedure for obtaining the films is described by which it is possible to obtain silicon films on sapphire which with respect to structure and properties are not inferior to the best films obtained by the method of thermal decomposition of siline or reduction of silicon halides. There are a large number of defects in the silicon films 1/2

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GRIGOR'YEV, O. N., et al., Poluprovodnikovaya tekhnika i mikroelektronika, No 6, 1971, pp 16-23

on sapphire the mechanism of occurrence of which is not fully explained and obviously is of a theoretical nature. The volt-ampere characteristics of the metal-oxide-semiconductor transistors manufactured by the proposed procedure are presented and discussed. The maximum transconductance of transistors with a channel width of 100 microns was 300 micromhos and varied within the limits of 200-300 micromhos. For transistors with a channel width of 400 microns, the transconductance is within the limits of 800-1,000 micromhos.

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SVECHNIKOV, S. V., SHTRUM, YE. L., KLOCHKOV, V. P., ZAV'YALOVA, L. I. and TORCHUN, N. M., Institute of Semiconductors, Academy of Sciences USSR

Monocrystalline Layers of Cadmium Selenide

Moscow, Izvestiya Akademii nauk SSSR, Neorganichaskiye materialy, Vol 7, No 12. Dec 71. pp 2146-2149

Abstract: This paper concerns the study of the specific properties of a single-crystal layer grown on a substrate. The excerimental layer of hexagonal and a mixture of hexagonal and cubic modifications was produced by vacuum deposition of cadmium selenide on mica substrates in a quasi-closed space. The morphology of the deposited layer indicates that the surface growth of cadmium selenide layers is formed by hexagonal pyramids or triangles and hexagons. Three basic types of pyramids are observed: pyramids with pointed apexes and flat lateral faces, stepped pyramids, and truncated pyramids. A correlation was revealed between the dimensions of the grown shapes and their electric conductivity. Both the resistivity and photosensitivity of the layers increase with the increasing cross section of the pyramids. The photosensitivity of single-crystal layers comprising cubic and hexagonal modifications of CdSe is higher than that of layers with hexagonal modifications. (1 illustrations, 10 bibliographic references)

- 61 -

TITLE--RELATION BETWEEN THE LIFETIME OF AN EXCITED STATE AND INTEGRAL

1/2

UNCLASSIFIED

PROCESSING DATE--13NOV70

AUTHOR--KLOCHKOV, V.P.

COUNTRY OF INFO--USSR

SOURCE--IZV. AKAD. AKAD. NAUK SSSR, SER. FIZ. 1970, 34(3), 632-5

DATE PUBLISHED ---- 70

SUBJECT AREAS--CHEMISTRY, PHYSICS

TOPIC TAGS--EXCITED-STATE, FLUDRESCENCE, BUTADIENE, BENZENE DERIVATIVE, ANTHRACENE, BROMINATED ORGANIC COMPOUND, CALCULATION, COMPLEX MOLECULE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED PROXY REEL/FRAME--2000/2015

STEP NO--UR/0048/70/034/003/0632/0635

CIRC ACCESSION NO--AP0125603

UNCLASSIFIED

CIRC ACCESSION NO--APO125603

ABSTRACT/EXTRACT-_UI) GP-O- ABSTRACT. A THEORETICAL DISCUSSION IS GIVEN IN TERMS OF QUANTUM THEORY WITH THE USE OF SOME EXPTL. LITERATURE DATA ON THE QUANTUM YIELD OF FLUORESCENCE AND RELAXATION TIME IN 14,0 DIPHENYLBUTADIENE, 1,6,0 IPHENYLHEXATRIENE (A, N, N) KIKITINA AND G. S. PROMO,10, METHOXYANTHRACENE. THE PREVIOUSLY SUGGESTED FORMULAS FOR CALCG. THE LIFETIME OF AN EXCITED STATE ACCORDING TO INTEGRAL ABSURPTION CALCRS. IN CASE OF COMPLEX MOLS.

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UDC 546.47 22:54 - 162.2

GRIGOR'YEV, O. N., TL'CHISHIN, V. A., KLOCHKOV, V. P., and TORCHUN, N. M., Institute of Semiconductors, Addemy of Schences Ukrainian SSR

"The Crystalline Structure of Electroluminescent Zinc Selenide Films"

Moscow, Izvestiya Akademii Nauk SSSR -- Neorganicheskiye Materialy, Vol 6, No 9, Sep 70, pp 1561-1563

Abstract: The literature contains no data on the structural properties of ZnSe films obtained by the two-step method, viz. evaporation of the substance on a cold substrate with subsequent heat treatment. The present article studies the effect of the following on the crystalline structure of ZnSe films: atmosphere, temperature and duration of heat treatment, the presence of a conducting layer (In203, SnO2) on the glass substrate, the thickness of the ZnSe film and various activators (Cu, Mn). The batch of Zn and Se was selected in such a way that at different annealing temperatures the Zn and Se vapor pressure was 0.5 and 1 atm, respectively. Annealing temperature varied from 300 to 650° C in 50° C intervals, annealing time one hour. Elec-

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CRIGCR'YEV, O. N., et al., Izvestiya Akademii Nauk SSSR -- Neorganicheskiye Materialy, Vol 6, No 9, Sep 70, pp 1561-1563

tron-diffraction and roentgenographic studies were made of the crystalline structure of the resultant ZnSe films.

The results indicate that annealing without an activator in vapors of a metal or metalloid has no appreciable effect on the phase composition of the initial films. When copper is introduced as activator, annealing in zinc vapors contributes to the formation of the hexagonal modification; annealing in selenium vapors contributes to the cubic modification. With an increase in the film thickness a transition is observed from films containing cubic-modification crystals to only nexagonal-modification films. The transition from crystals of cubic modification to hexagonal modification results from errors in the application of the layers. Orientation of the crystals of hexagonal modification improves with increased thickness.

The authors thank N. A. VIASENKO for his advice and for discussing the results.

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USSR

UDC: 51:801

KLOCHKOVA, E. A.

"Experiments on Determining the Entropy of a Kalmuck Printed Text"

V sb. Vychisl. metody i programmir. (Computer Methods and Programming-collection of works), vyp. 4, Saratov, Saratov University, 1970, pp 43-45 (from RZh-Kibernetika, No 7, Jul 71, Abstract No 7005)

[No abstract]

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APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R001401410003-7"

1/2 024

UNCLASSIFIED

PROCESSING DATE--020CT70 TITLE--PRODUCTION OF LARGE SIZED SECTIONS OF A TUBULAR PURNACE FROM GLASS

FIRER REINFORCED PLASTIC -U-

AUTHUR-(02)-KLOCHROVA, M.R., DOBRONRAYOV, V.A.

COUNTRY OF INFO--USSR

SOURCE--KHIM. NEFT. MASHINUSTR. 1970 (2) 28-30

DATE PUBLISHED----70

SUBJECT AREAS -- MATERIALS, MECH., IND., CIVIL AND MARINE ENGR

TOPIC TAGS--GLASS FIBER, REINFORCED PLASTIC, PHENOL FURMALDEHYDE RESIN, PULYMER BINJER, FURNACE, PLASTIC FABRICATING MACHINERY/(U)AG4S GLASS REINFURCED PLASTIC

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED PROXY RELL/FRAME--1902/1508

STEP NU--UR/0314/70/000/002/0028/0030

CIRC ACCESSION NO--APOLIZEDZ

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R001401410003-7"

2/2 024 UNCLASSIFIED PROCESSING DATE--020CT70
CIRC ACCESSION NO--APDI12502
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE PRODUCTION TECHNOL. OF LARGE
GLASS FIBER REINFORCED PLASTIC AG-4S (II) DRUMS (BASE) ON A PHOH-CH SUB2
U SINGER) IS DISCUSSED AT LENGTH. A CROSS SECTIONAL DIAGRAM OF THE
PRODUCTION APP. AND ITS MODE OF OPERATION ARE PRESENTED. THE
SPECIFICATIONS OF THE I DRUMS ARE GIVEN.

UNCLASSIFIED

1/2 020 UNCLASSIFIED PACCESSING DATE--20NOV70
TITLE--FUNCTIONAL CHANGES OF THE LIVER IN MUSHROOM POISONING -U-

AUTHOR-(04)-GRECHISHKIN, D.K., MOZHAYEV, G.A., KLODCHENKO, N.N.,
GONCHARGV, A.I.

CCUNTRY OF INFG--USSR

SCURCE--VRACHEBNOYE DELE, 1970, NR 5, PP 60-62

DATE PUBLISHED----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--FUNGUS, PUISON EFFECT, LIVER FUNCTION

CENTROL MARKING--NO RESTRICTIONS

PROXY REEL/FRAME--3001/0433

STEP NO---UR/0475/70/000/005/0060/0062

CIRC ACCESSION NO--APO126186

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R001401410003-7"

2/2 020 UNCLASSIFIED PROCESSING DATE--- 20NOV70 CIRC ACCESSION NO-APO126186 ABSTRACT/EXTRACT--(U) GP-O- ABSTRACT. RESULTS ARE ANALYSED OF A STUDY OF THE CARBOHYDRATE, PIGMENTARY AND ENZYMATIC LIVER FUNCTIONS IN PATIENTS POISGNED WITH THE AGARICUS BULBOSUS MUSHRODM. IT WAS FOUND THAT AS A RESULT OF THE EFFECT OF AGARICUS BULBOSUS TOXINES ABNORMAL CHANGES DEVELOP OF THE PIGMENTARY AND ENZYMATIC FUNCTIONS OF THE LIVER, THE CARBOHYGRATE FUNCTION REMAINING UNCHANGED. HEPATOPROTECTING THERAPY IS RECOMMENDED. FACILITY: VOROSHILOYGRAUSKOGD MEDITSINSKOGD INSTITUTA. UNCLASS IF 1ED

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UDC: 8.74

AL'PEROVICH, E. Ye., BATISHCHEV, D. I., BASALIN, P. D., BEDNAYA, R. I., KOROTCHENKO, A. G., KONYUGINA, L. A., KOLDORKINA, L. R., SERGEYEVA, N. M., SUKHAREVA, V. A.

*SAPPOR -- a System for Automating the Process of Making Optimum Decisions"

Moscow, Kibernetich. sisteny avtomatiz. proyektir.--sbornik (Cybernetic Automated Design Systems--collection of works), 1973, pp 29-35 (from RZh--Kibernetika, No 7, Jul 73, abstract No 7V633 by A. Doroshenko)

Translation: SAPPOR is a dialog system oriented for making optimum decisions in the process of designing technical devices. The system is realized on the BESM-3M computer with two memory arrays, the second being designed for operation of a screen panel. The software of the system is based on the modular principle and has the following modules:

1) "Model" — for constructing the mathematical model of the object being designed. This block is replaceable and varies depending on the class of the object of optimization. In developing the SAPPOP, RLC circuits were taken as models. 2) "Formulation of the Problem" — a compiler which prepares classes of problems formulated by the designer for

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APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R001401410003-7"

(3)

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AL PEROVICH, E. Ye. et al., Kibernetich. sistemy avtomatiz. proyektir., 1973, pp 29-35

solution (calculating the characteristics of the object, optimizing the mathematical expectation in satisfying probability limitations, etc.). 3) "Method of Solution" -- a set of programs for finding the global minimum of an arbitrary curve, minimizing multiparameter functions and numerically solving problems in nonlinear programming. 4) "Check" -- enables following and controlling the process of finding the optimum with respect to information which may appear at the output (alphanumeric printer, screen panel) as ordered by the operator. 5) "Output of Results" -gives the results of optimization in the form of graphs and tables on a screen panel or on paper with the use of an alphanumeric printer or a "Konsul" typewriter. The last four modules are universal and do not depend on the type of optimization object. An advantage of the SAPPOR is the possibility for operative search for the optimum decision and the combination of the designer's experience and intuition with rigorous mathematical methods. In this connection, the design process can be carried out without knowledge of computer programming and the corresponding methods of search optimization.

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19

Heat, Combustion, Detonation

USSR

UDC:534.222.2

BORISOV, A. A., GEL'FAND, B. Ye., GUBIN, S. A., KLOGARKO, S. M., PODCREBENKOV, A. L., Moscow

"Reaction Zone Upon Detonation of Two-Phase Mixtures"

Novosibirsk, Fizika Goreniya i Vzryva, Vol. 6, No. 3, Sep 70, pp. 374-385

Abstract: This work presents a study of the nature of the change in thermodynamic and gas-dynamic parameters of a gas-liquid combustion mixture in the reaction zone of the detonation wave. The purpose of the investigation was estimation of the size of the zone of heat liberation beyond the wave, the criterion which determined the possibility of stable propagation of detonation. Calculation of the changes of parameters of a two-phase mixture upon heterogeneous detonation performed using two different mechanisms of transition of the liquid phase to the gas phase showed the following: 1) breakup of droplets significantly intensifies the combustion of the liquid in comparison with the evaporation process;

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USSR

UDC:534.222.2

BORISOV, A. A., GEL'FAND, B. Ye., GUBIN, S. A., KLOGARKO, S. M., PODGREBENKOV, A. L., Novosibirsk, Fizika Goreniya i Veryva; Votr 6, No. 3, Sep 70, pp. 374-385

2) a detonation model constructed on the assumption that the rate of combustion of the two-phase mixture is determined by the rate of drop breakup apparently gives the correct value of reaction zone length; 3) the length of the reaction zone during heterogeneous detonation is decreased sharply with decreasing average liquid drop size; 4) the energy loss to drop acceleration in the reaction zone is slight; and 5) full calculation of the reaction zone with heterogeneous detonation of droplets of at least 100 µ diameter must be performed considering deformation and breakup of the droplets.

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USSR

UDO 621.438 + 621.039.5

TETEL BAUM, S.D., SMIRNOV, G.F., KLCK, A.M.

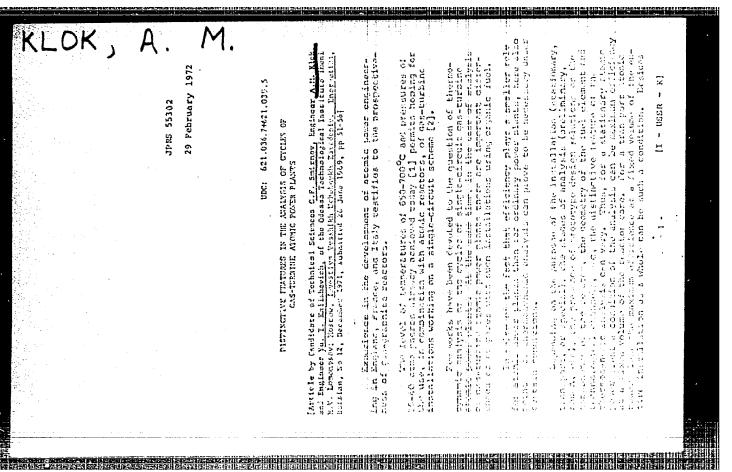
"Possibility Of Creating Economical And Compact Ship Atomic Gas-Turbina Installation With The Use Of New Working Substances"

Sydostr. i mor. soopuzh. Resp. mezhved. temat. nauch.-tekhn. sb. (Shipbuilding And Marine Construction. Republic Interdepartmental Thematic Scientific-Technical Collection), 1972, Issue 18, pp 31-38 (from RZh:Yadernyye reaktory, No 7, July 1972, Abstract No 7.50.23)

Translation: It is shown that with the use of mixtures of certain gases with helium as a working substance it is possible to increase the thermodynamic efficiency of a cycle after the minimum surface of the regenerator has been maintained, the maximum power of the turbine increased, and a number of other indices of a ship single circuit AGTU (atomic gas-turbine installation) improved. An analysis is made with the limitations taken into account which are applied to such devices consistent with a specific nuclear reactor. 3 ill. 14 ref.

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APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R001401410003-7"



UNCLASSIFIED PROCESSING DATE--090CT70 1/2 031

TITLE-ANTIBODY CONTENT TO SHEEP ERYTHROCYTES AND ANTI O STREPTOLYSINS IN

MENTAL PATIENTS -U-AUTHOR-(03)-KONSTANTINOVA, T.P., ILINSKIY, YU.A., KLOKOV, YE.A.

COUNTRY OF INFO--USSR

SOURCE-ZHURNAL NEVROPATOLOGII I PSIKHIATRII IMENI S. S. KORSAKJVA, 1970, WOL 70, NR 4, PP 592-596 DATE PUBLISHED -----70

SUBJECT AREAS-BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS-ANTIBODY, ERYTHRUCYTE, HEMAGGLUTINATION, PSYCHOSIS, SCHIZOPHRENIA, ALCOHOL, INSULIN, NERVOUS SYSTEM DRUG

CONTROL MARKING-NO RESTRICTIONS

DOCUMENT CLASS-UNCLASSIFIED PROXY REEL/FRAME--1988/1659

STEP ND--UR/0246/70/070/004/0592/0596

CIRC ACCESSION NO--APO106405

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R001401410003-7"

PROCESSING DATE--090CT70 UNCLASSIFIED 2/2 031 CIRC ACCESSION NU-APO106405 ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A STUDY HAS BEEN CONDUCTED WITH 244 MENTAL PATIENTS AND 166 DONORS OF THE CENTRAL INSTITUTE OF BLOOD TRANSFUSION FOR THE DETERMINATION OF THE LEVEL OF NORMAL ANTIBODIES (HEMOLYSINS AND HEMAAGGLUTINATION TO SHEEP ERYTHROCYTES) AND ANTI O THE PATIENTS WERE DIAGNOSED IN THE FOLLOWING WAY: 94 STREPTULYSINS. CASES WITH SCHIZOPHRENIA; 47, WITH ORGANIC BRAIN LESIONS (MAINLY OF A TRAUMATICAL AND INFECTIOUS ETIDLOGY): 26, WITH REACTIVE STATES; 19, WITH CHRONIC ALCOHOLISM; 26. WITH PSYCHOPATHY, ETC. AMONG THE SCHIZOPHRENIC PATIENTS 67 WERE TREATED WITH AMINAZINE, STELAZINE OR INSULIN. IT WAS ESTABLISHED THAT THE MOST DEMONSTRABLE TEST WAS THE HEMOLYSIN TITRE. ITS FLUCTUATION WAS NOTED IN THE DIFFERENT NOSOLOGICAL GROUPS. THE HEMOLYSIN TITRE WAS SIGNIFICANTLY HIGHER IN SCHILLPHRENIC PATIENTS DURING INSULIN THERAPY. THIS ALLOWS TO ASSUME THAT THE HEMOLYSIN TITRE, AS A MORE DYNAMICAL ONE, THAN THE OTHER TWO STUDIED INDICES MAY REFLECT THE CHANGES IN THE IMMUNOLOGICAL REACTIVITY IN MENTAL DISORDERS AND BE USEFUL FOR THE GENERAL CLINICAL EVALUATION AND THE DETERMINATION OF THE PROGNOSIS.

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APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R001401410003-7"

UDC 616.988.75-036.22.1969.(470.62)

USSR

KLOKOVA, G. F., TSYS', N. S., and PODVARKO, A. G., Chair of Infectious Diseases, Kuban Hedical Institute, and Second City Hospital, Krasmodar

"Clinical Characteristics of Influenza at Krasnodar"

Moscow, Sovetskaya Meditsina, No 6, Jun 71, pp 132-133

Abstract: During the first quarter of 1969 there was an increased incidence of influenza at Krasnodar. In the epidemic in question, the number of cases increased rapidly and then decreased slowly. During Jan-Mar 1969, 527 adults with influenza were treated at the Clinic of Infectious Diseases. The hemagglutination inhibition reaction was carried out with sexa of 298 patients. was positive in 43.% of the cases; diagnostically reliable titers with the virus A2, A2 (Hong-Kong), and B were found in 90, 21, and 5 cases, respectively. A detailed study was carried out of 131 cases of serologically diagnosed influenza and, on the basis of the case histories, of 3 cases of patients who died. A comparison of the clinical course of influenza in 1967 with that in 1969 showed that the 1969 epidemic was more severe. Influenza in a severe form was encountered in 21.6% of cases in 1969 vs. 3.3% in 1967. Complications developed in 46.2% of cases in 1969 vs. 34.7% in 1967. Of patients who were hospitalized, 3% (4 of 134 patients) died in 1969, while none died in 1967.

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USSR

KLOKOVA, G. F., et al., Sovetskaya Meditsina, Vol 34, No 6, Jun 71, pp 132-133

The clinical symptoms observed in 1969 and 1967 did not differ significantly; there were a brief period of fever and an acute toxic condition that developed within 1-2 days.

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- 47 -

1/2 017 UNCLASSIFIED PROCESSING DATE-300CT70
TITLE-CLINICO LABORATORY PECULIARITIES OF CURRENT DYSENTERY ACCORDING TO

MATERIALS OF KRASNODAR SECOND CITY HOSPITAL -U-

AUTHOR-(05)-KLOKOVA, G.F., PODVARKO, A.G., TSYS, N.S., ANDSHINA, L.I., GONCHAROVA, YE.I.

COUNTRY OF INFO-USSR

SOURCE-ZHURNAL MIKROBIOLOGII, EPIDEMIOLOGII I IMMUNOBIOLOGII, 1970, NR 6, PP 37-40

DATE PUBLISHED ----- 70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS-DYSENTERY, ANTIBIOTIC RESISTANCE, STREPTOMYCIN, CHLORAMPHENICOL/(U)BIOMYCIN ANTIBIOTIC

CONTROL MARKING-NO RESTRICTIONS

DOCUMENT CLASS-UNCLASSIFIED PROXY REEL/FRAME--3001/0833

STEP NG--UR/0016/70/000/006/0037/0040

CIRC ACCESSION NO--APO126510

----UNCLASSIFIED-

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R001401410003-7"

PROCESSING DATE--300CT70 UNCLASSIFIED 017 2/2 CIRC ACCESSION NO--APO126510 ABSTRACT. A STUDY WAS MADE OF 258 CASE ABSTRACT/EXTRACT-- (U) GP-0-HISTORIES OF PATIENTS SUFFERING FROM DYSENTERY WITH BACTERIOLOGICALLY CONFIRMED DIAGNOSIS: CLINICO LABORATORY INDICES OF THE DISEASE HERE COMPARED IN 1957 (122 PATIENTS) AND IN 1967 (136 PATIENTS). A PREVALENCE OF SONNE DYSENTERY IN 1967 WAS NOTED (BOPERCENT); IT DIFFERED FROM FLEXNER DYSENTERY BY A MILDER COURSE, AN INCREASE IN THE NUMBER OF ATYPICAL, LATENT FORMS AND OF FORME FRUSTE, AND ALSO BY A LESSER INCIDENCE OF THE CHANGE TO CHRONIC FORM. IT APPEARED THAT 59.5PERCENT OF ALL THE SONNE STRAINS WERE RESISTANT TO CHLORAMPHENICOL. BIDHYCIN AND FACILITY: KUBANSKIY MEDITSINSKIY INSTITUT IM. STREPTOMYCIN. KRASNOY ARMIII I GORODSKAYA BOL'NITSA NR 2, KRASNODAR.

> UNCLASSIFIED 原理整理的影響的影響的影響的影響的影響的影響的影響的影響的影響的影響的影響的影響。

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UNCLASSIFIED PROCESSING DATE--300CT70

TITLE-THE CONTENT OF UROPEPSIN IN PATIENTS SUFFERING FROM INFECTIOUS

DISEASES -U-

AUTHOR-KLOKOVA, G.F.

COUNTRY OF INFO-USSR

SCURCE-KLINICHESKAYA MEDITSINA. 1970. VOL 48, NR 6, PP 74-77

DATE PUBLISHED----70

SUBJECT AREAS-BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS-ENZYME, DYSENTERY, HEPATITIS, DIET, HORHONE, SECRETION, STOMACH. ADRENAL GLAND, KIDNEY, DIAGNOSTIC METHOD

CONTROL MARKING-NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED PROXY REEL/FRAME--3002/1713

STEP NO--UR/0497/70/048/006/0074/0077

CIRC ACCESSION NO--APO129082

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R001401410003-7"

PROCESSING DATE--300CT70 UNCLASSIFIED 022 2/2 CIRC ACCESSION NO--AP0129082 ABSTRACT/EXTRACT-- (U) GP-O- ABSTRACT. N. P. PYATNITSKY'S METHOD WAS EMPLOYED FOR THE DETERMINATION OF UROPEPSIN EXCRETION IN 120 PATIENTS WITH ACUTE DYSENTERY AND IN 101 PATIENTS WITH INFECTIOUS HEPATITIS. TOTAL OF 774 INVESTIGATIONS FOR UROPEPSING IN THE URINE WERE CARRIED OUT. IN DYSENTERY AND INFECTIOUS HEPATITIS THERE EXISTS A DEFINITE UNITYPICAL CURVE OF UROPEPSIN EXCRETION. WITH THE COURSE OF THE DISEASE THE LEVEL OF UROPEPSIN PROGRESSIVELY DECLINES, ITS MINIMAL DROP WAS OBSERVED ON THE SECOND WEEK OF DYSENTERY AND ON THE 4TH-5TH WEEK OF INFECTIOUS HEPATITIS. DURING CONVALESCENCE THE QUANTITY OF UROPEPSIN RISES, HOWEVER AT THE TIME OF DISCHARGE FROM THE HOSPITAL IT STILL DOES NUT REACH THE INITIAL LEVEL. THE OBSERVED DYNAMICS OF URUPEPSIN EXCRETION GIVES GROUNDS TO RECOMMEND A RATIONAL PLAN OF DIETETIC AND MEDICINAL TREATMENT OF PATIENTS IN ACCORDANCE WITH THE STAGE OF THE THE DETERMINATION OF UROPEPSIN COULD DISEASE (PATHOGENETIC THERAPY). ALSO BE USED AS A TEST DURING HURMONAL TREATMENT FOR CONTROLLING THEIR INFLUENCE ON THE SECRETURY FUNCTION OF THE STOMACH, AS WELL AS A TEST WHICH ENABLES TO ASSESS THE FUNCTIONAL STATE OF THE ADRENALS IN PERSONS FACILITY: KAFEDRY WITH HEALTHY KIDNEYS AND STOHACH. INFEKTSICHNYKH BOLEZNEY KUBANSKOGO MEDITSINSKOGO INSTITUTA IM KRASNOY ARMII.

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USSR

UDC 632.95

BLIZNYUK, N. K., PROTASOVA, L. D., KVASHA, Z. N., KLIMOVA, T. A., and KLOPKOVA, R. S., All-Union Institute of Phytopathology

"Synthesis of Thiophosphocyclopentenyl Chlorides"

USSR Author's Certificate No 327208, filed 16 Jun 70, published 28 Mar 72 (from Referativnyy Zhurnal -- Khimiya, Svodnyy Tom, (I, L-S), No 1(II), 1973, Abstract No 1N457P by T. A. Belyayeva)

Translation: The intermediate products for the synthesis of pesticides, the alkylthiophosphocyclopentenyl chlorides, were prepared during the reaction of diene hydrocarbon with alkyldichlorophosphite and PSCl₃ at 100-150°C. Example. One mole 8u0H is added to 3 moles PCl₃ at 15-20°C with constant stirring, the mixture is heated at 60-65°C for 2-3 hr; the reaction mixture is cooled to 0-5°C, then 1 mole of colled CH₂=CHCH=CH₂ and 3 moles PSCl₃ are added, the mixture is heated in a stainless autoclave at 110-120°C for 3 hr. The mixture is distilled and the mixture of acid chloride isomers of thiophosphocyclopentenic (2 and 3) acid is separated from the reaction mixture. The yield was 81%, b.p. 120-140°C/14, n²⁰D 1,5840, d₄²⁰ 1,3225. The acid chloride of 3-methylthiophosphocyclopentenic-3 acid was also obtained, b.p. 137-140°C/12, n²⁰D 1,5895, m.p. 43-45°C, as well as mixture 1/2

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USSR

BLIZNYUK, N. K., et al., USSR Author's Certificate No 327208, filed 16 Jun 70, published 28 Mar 72

of isomers of acid chloride of 3-methylthiophosphocyclopentenic (2 and 3) acid, b.p. $125-135^{\circ}$ C/12, n^{20} D 1,5845. Example of the reaction with piperylene.

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APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R001401410003-7"

UDC 547.241.07

USSR

BLIZNYUK, N. K., PROTASOVA, L. D., KVASHA, Z. N., KLIMOVA, T. A., and KLOPKOVA, R. S., All-Union Scientific Research Institute of Phytopathology

"A Method of Making Phosphinic Acids"

Moscow, Otkrytiya, izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, No 11, Apr 71, Author's Certificate No 298591, division C, filed 23 Jan 70, published 16 Mar 71, p 87

Translation: This Author's Certificate introduces: 1. A method of making phosphinic acids of the general formula

where R is an alkyl, aryl, or aralkyl, and R' is an alkyl or aralkyl. As a distinguishing feature of the patent, the process is simplified and the raw material base is extended by treating diarylphosphonite with alcohol in the presence of a catalyst with subsequent isolation of the product by conventional methods. 2. A modification of this method distinguished by the 1/2

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USSR

BLIZNYUK, N. K., et al., Otkrytiya, izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, No 11, Apr 71, Author's Certificate No 298591, division C, filed 23 Jan 70, published 16 Mar 71, p 87

fact that the process is carried out with heating to 150-250°C. 3. A modification of this method distinguished by the fact that alkyl halides or metal halides are used as a catalyst in quantities of 0.005-0.1 mole per mole of the starting phosphonite.

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UNCLASSIFIED PROCESSING DATE--13NDV70
TITLE--MODIFICATION OF UNSATURATED POLYMERS AND COPOLYMERS OF

1,3,8UTADIENE -U-

AUTHOR-103)-TIKHOMIROV, B.I., KLOPOTOVA, I.A., YAKUBCHIK, A.I.

COUNTRY OF INFO--USSR

SOURCE--U.S.S.R. 265,432 REFERENCE--OTKRYTIYA, IZOBRET., PROM. OBRAZISY, TOVARNYE LNAKI 1970, DATE PUBLISHED--O9MAR70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--BUTADIENS, CHEMICAL PATENT, POLYMER, COPOLYMER, CATALYTIC HYDROGENATION, ORGANIC PHOSPHORUS COMPOUND, RHODIUM COMPOUND

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED PROXY REEL/FRAME--3002/1426

STEP NO-+UR/0482/70/000/000/0000/0000

CIRC ACCESSION NU--AA0128825

UHCLASSIFIED ---

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R001401410003-7"

	UNCLASSIFIED	PROCESSING	DATE13NOV70
CIRC ACCESSION NOAA0128825 ABSTRACT/EXTRACT(U) GP-0- 1,3,BUTADIENE ARE MODIFIED	BY HOMOGENEOUS HYD	POLYMERS AND ROGENATION IN	COPOLYMERS OF A HYDROCARBON
SOLVENT IN THE PRESENCE OF TRIS(TRIPHENYLPHOSPHINE)CHLA., STATE UNIVERSITY, LENIM	LUROKHODIUM.	FACILITY:	ZHDANOV, A.
unit.	t-ASS1F1ED		

UDC 621.357.035.4:621.79.027(088.8)

DAVYDOV, A. D., KARKIN, A. N., KASHCHEYEV, V.D., MITYASHKIN, D. Z., KLOPOVA, S. V.

"Electrolyte for Electrochemical Machining of Niobium and Its Alloys"

USSR Author's Certificate No 315558, filed 13 Apr 70, published 30 Nov 71 (from RZh-Khimiya, No 12, Jun 72, Abstract No 12L311P)

Translation: An electrolyte has been patented for electrochemical machining of Nb and its alloys. It is distinguished by the fact that in order to increase the process stability and the quality of the surface subjected to anodic solution, a bromide salt, for example, NaBr, a nitrate salt, for example, NaNO₃, a base, for example, NAON, H₃BO₃ and water are incroduced into its composition. The components are taken in the following proportions (in % by weight): bromide salt 30-50, nitrate salt 0.5-2, alkali 0.5-2, H₃BO₃ 3, the rest water.

The proposed electrolyte has been tested on an experimental setup. Flat specimens produced by turning with an area of 8 cm² and a class 4-5 surface finish were machined. The machining was carried out in a solution of the following composition (% by weight), KBr 45, NaNO₃ 1, KOH 1. The electrode gap is maintained within the limits of 0.3 mm, and the electrolyte pressure at the intake to the operating gap is 8 kg/cm². When applying a voltage of 6 volts to the

DAVYDOV, A. D., et al., USSR Author's Certificate No 315558, filed 13 Apr 70, published 30 Nov 71

system, destruction of the film of Nb pentoxide takes place, and the current strength increases sharply. The rate of anodic solution increases linearly with an increase in D. The BT is ~70%. The electrolyte temperature is kept within the limits 20+ 3° by means of a special refrigerating unit. After machining, a smooth light surface with 6-7 class finish was obtained. After passage of 10 a/hour, the pH of the electrolyte decreases from 13 to 9, and the machining quality becomes worse. This can be eliminated by adjusting the electrolyte with alkali, but it is expedient to introduce 3% boric acid into the composition which has a buffering effect and to increase the alkali content to 2% in order not to lower the initial pH value.

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APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R001401410003-7"

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USSR

UDC: 681.333

MOROZ, I. P., KOBZOVA, V. M., KIOS, V. I., L'vov Affiliate of the Institute of Geophysics, Academy of Sciences of the Ukrainian SSR

"A Device for Modeling Problems of Electromagnetic Induction"

Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obraztsy, Tovarnyye Znaki, No 7, Mar 72, Author's Certificate No 329537, Division G, filed 28 Sep 70, published 9 Feb 72, p 194

Translation: This Author's Certificate introduces a device for modeling problems of electromagnetic induction. The device contains a generator connected to an antenna system, and also includes an electromagnetic field pickup, a heterodyne, and a module for reception and registration. As a distinguishing feature of the patent, in order to eliminate interference and to increase precision and reliability, the device contains a frequency converter connected to an electromagnetic field pickup, and through transformers to the module for reception and registration and to a unit for stabilizing the output voltage level of the heterodyne.

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APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R001401410003-7"

1/3 020

PROCESSING DATE--13NOV70

UNCLASSIFIED TITLE--CORRELATION BETWEEN STRUCTURE AND FUNCTION IN THE DEVELOPING AND

MATURE BRAIN -U-

AUTHOR-(02)-KLOSOVSKIY, B.N., KOSMARSKAYA. YE.N.

COUNTRY OF INFO--USSR

SOURCE--VESTNIK AKADEMII MEDITSINSKIKH NAUK SSSR, VOL 25, NR 3, 1970,

PAGES 46-52

DATE PUBLISHED----70

SUBJECT AREAS-BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--EMBRYOLOGY, BRAIN, SPINAL CORD, NEURON

CONTROL MARKING -- NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED PROXY REEL/FRAME--3003/0978

STEP NU--UR/0248/70/025/003/0046/0052

CIRC ACCESSION NO--APO130026

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and statement and the fact in the statement of the statem

020 UNCLASSIFIED PROCESSING DATE--13NOV70 2/3 CIRC ACCESSION NO--AP0130026 ABSTRACT/EXTRACT--(U) GP-0-ABSTRACT. IN THE NERVOUS SYSTEM STRUCTURE AND FUNCTION ARE MUTUALLY DETERMINED THROUGHOUT THEIR INTRA AND EXTRA UTERINE DEVELOPMENT, AND THEY ARE ALSO INSEPARABLY LINKED IN THE MATURE HOWEVER, THE INTERDEPENDENCY OF MORPHOLOGICSL STRUCTURE AND PHYSIOLOGICAL FUNCTION EMERGES THE MOST DISTINCTLY IN THE COURSE OF EMBRYOGENESIS WHEN, WE COULD SAY, BEFORE OUR VERY EYES FUNCTION OF DIFFERENT PARTS OF THE BRAIN AND SPINAL CORD CHANGES IN ACCORDANCE WITH CHANGE IN STRUCTURE OF THE NERVOUS SYSTEM. THE CHIEF ELEMENT OF THE BRAIN MATTER IS THE NEURON. OUR INVESTIGATIONS REVEALED THAT THE CAUSES OF DEVELOPMENT OF THE STRUCTURE OF EACH NEURON IS BASED ON ITS LINK WITH PERIPHERAL RECEPTOR FIELDS. THIS RELATION CAN BE DIRECT OR INDIRECT, WHEN THE CELL RECEIVES A FLOW OF INFORMATION FROM A RECEPTOR THROUGH THE MEDIATION OF OTHER CELLS (B. N. KLOSOVSKIY, 1959; B. N. KLOSOVSKIY AND YE. N. KOSMARSKAYA, 1956, 1959; YE. N. KOSMARSKAYA, 1966). AT THE SAME TIME ORGANIZATION OF STRUCTURE AND CONSEQUENTLY OF FUNCTION OF THE NEURON ARE DETERMINED BY THE NATURE AND DISTINCTIVE FEATURES OF THE INTERNAL MEDIUM AROUND IT, I. E. BY THE STATE OF THE BLOOD AND SPINAL FLUID SYSTEMS AS WELL AS DEGREE OF DEVELOPMENT AND MEANS OF INTERACTION WITH THE GUIN (B. N. KLOSOVSKIY, 1965; B. N. KLOSOVSKIY, YE. N. KOSMARSKAYA, 1961). THUS, ACCORDING TO OUR POINT OF VIEW, WE CAN GAIN AN IDEA OF THE PATTERNS OF DEVELOPMENT OF STRUCTURE AND FUNCTION OF THE NERVOUS SYSTEM ONLY THROUGH COMBINED INVESTIGATION OF INTERDEPENDENT PROCESSES OF DEVELOPMENT OF ALL OF THE ABOVE MENTIONED COMPONENTS OF BRAIN MATTER.

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WDC 621.355.8.035.2

BORISOV, P. A., and KIOSS, A. I.

"The Electrochemical Activity of Nickel in Hot Concentrated Solutions of NaOH"

Sb. rabot no khim. istachnikam toka. Vses. n.-n akkumulyator. in-t (Collection of Works on the Chemical Source of Current. All-Union Scientific Study Institute for Storage Batteries). Vyp 7, 1972, pp 112-118 (from Referativnyy Zhurnal -- Khimiya, No 8(II), 1973, Abstract No 8L232)

Translation: By plotting the galvanostatic curves of the change in the potential with time, by x-ray, and by chemical analysis, it was shown that the oxidation of the metal with the formation of $Ni(OH)_2$ is a single anode

process for the nickel electrode in a 50% NaOH solution at temperatures of 90-130°. The process of the exidation of nickel under these conditions is reversible and occurs at depths in the electrode. During multiple cycles of the anode and cathode polarization, the reversibility is preserved, thus the nickel electrode may be used in high temperature batteries. (Author's abstract).

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APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R001401410003-7"

KLOTS, V. I., Andizhan Oblast Sanitary Epidemiological Station

"A Case of Anaphylactic Shock After Administration of Anit-Anthrax Gamma Globulin"

Tashkent, Heditsinskiy Zhurnal Uzbekistana, No 3, 1971, p 72

Translation: In recent years a variety of specific preparations from human and animal blood serum have come into widespread use in public health practice. Fany investigators (A. T. Kravchenko et al) believe that the frequent administration of such antigens provides protection against infectious diseases, although it sometimes creates mild allergies (slight local reaction, elevated body temperature, and so forth) or severe allergies (marked impairment of functions of organs and systems).

We observed a severe case of an allergy in response to the injection of a specific preparation from animal serum. Patient h., 56 years of age, who had been in contact with an animal syspected of having anthrax, received divided doses of specific gamma globulin for therapeutic and prophylactic purposes on 26 Aug 1967. One and one-half hours after the entire dose was injected, the patient developed general weakness, vertigo, and vomiting, and minutes later went into a coma.

She remained unconscious and in critical condition on 27 August. The skin and visible mucosa were pale, body temperature was 40°C, and she did not react to the surroundings. Her mouth was half-open, the tongue and oral

- 63 ~

USSR

KLOTS, V. I., Meditsinskiy Zhurnal Uzbekistana, No 3, 1971, p 72

mucosa dry, and the tongue covered with a white coating. Heart tones were weak and arrhythmic, arterial pressure 140/85. Pulse rate was 130 beats per minute, and pulse was shallow. Faint breathing was audible along lateral surfaces of the lungs, with dry rales. Abdomen was soft, somewhat distended. Liver and spleen not palpable. Stool and urination were involuntary.

Neurologic status: eyes were open, pupils contracted, sluggish reaction to light. Marked motor restlessness was noted, intermittent automatic movements of the upper extremities, and clonic spasms. Slight rigidity of the occipital muscles was noted and Kernig's sign was positive. Abdominal reflexes were not elicited and there was a sluggish reaction to pinpricks.

No pathological substances were found in the spinal fluid.

Despite anit-infective and desensitizing treatment, the patient did

not improve and on 30 August 1967 she died.

Considering the case history (the patient sufferred from bronchial asthma) and the speed with which the symptoms appeared, it is reasonable to assume that she developed anaphylactic shocl in response to injection of the gamma globulin.

This case is of practical interest to clinicians, pathologists, and

immunologists.

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1/2 028 UNCLASSIFIED PRICESSING DATE--020CT70
TITLE--REACTOGENIC AND SENSITIZING PROPERTIES OF CHOLERA VACCINE -U-

AUTHUR--KLETS, V.I.

COUNTRY OF INFO--USSR

SOURCE--ZHURNAL MIKROBIOLOGII, EPIDEMIDLOGII I IMMUNOBIOLOGII, 1970, NR 3, PP 68-71
DATE PUBLISHED-----70

SUBJECT AREAS-BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--CHOLERA VACCINE, VACCINATION, ANTIBODY, HEMAGGLUTINATION

CONTROL MARKING-NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED PROXY REEL/FRAME--1990/1488

STEP NO--UR/0016/70/000/003/0068/0071

CIRC ACCESSION NO--APO109548

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R001401410003-7"

2/2 950 UNCLASSIFIED PROCESSING DATE--020CT70 CIRC ACCESSION NO--AP0109548 ABSTRACT/EXTRACT--(U) GP-0-REACTION EXPRESSED IN WEAKNESS. ABSTRACT. HEADACHE, NAUSEA AND URTICARIA WAS SEEN IN A NUMBER OF CASES IN IMMUNIZATION OF THE POPULATION WITH CHOLERA VACCINE. CASES OF ACTIVATION OF LATENT INFECTION IN PERSONS IMMUNIZED WITH CHOLERA VACCINE WERE NOTED I ACCORDING TO PARAALLERGY TYPE). THESE PHENOMENA APPEARED IN 6 TO 24 HOURS, AND SOMETIMES ON THE 4TH OR 5TH DAY AFTER THE VACCINATION. SUCH REACTIONS OCCURRED NOT ONLY IN THE VACCINATED INDIVIDUALS, BUT ALSO IN THOSE WHO PERFORMED THE VACCINATION. THEIR BLOOD DEMONSTRATING THE PRESENCE OF ANTIBODIES AND HEMAGGLUTIVINS.

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USSR

UDC: 615.371:575.851.315.085

KLOTS, V.I., Andizhanskaya Oblast Sanitary-Epidemiological Station

"The Reactivity and Sensitizing Properties of Cholera Vaccine"

Moscow, Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii, No 3, 1970, pp 68-71

Abstract: Inoculation of 4611 persons of both sexes and various age groups with dry cholera vaccine prepared by the Irkutsk Antiplague Research Institute produced (within 6-24 hours) a pronounced febrile reaction, inflammation at the vaccination site, general weakness, headaches, nausea, vomiting, frequent liquid stools, rashes, and lymphadenitis in a substantial number of cases, especially in children 7-10 and adults 40-50 years old, and in females of all ages. The frequency and intensity of the side effects increased after revaccination. In a few cases a single vaccination activated a latent infection (brucellosis) and Quincke's edame within 4-15 days. To determine the presence of increased sensitivity to cholera vaccine and the duration of postvaccinal allergy, 307 skin tests were performed 10 months after the vaccination. The reaction was positive in 14-15 of the cases.

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1/2 018 UNCLASSIFIED PROCESSING DATE--27NOV70

TITLE--DIFFUSION OF IMPURITIES IN POLYCRYSTALLINE COPPER. II. DIFFUSION OF ARSENIC -U-

AUTHOR-(04)-KLOTSMAN, S.M., RABOVSKY, YA.A., TALINSKY, V.K., TIMOFEYEV, A.N.

COUNTRY OF INFO--USSR

SOURCE-FIZIKA METALLOV I METALLOVEDENIE, APR. 1970, 29, (4), 803-806

DATE PUBLISHED ---- 70

SUBJECT AREAS -- PHYSICS, MATERIALS

TOPIC TAGS--METAL IMPURITY, METAL DIFFUSION, COPPER, ARSENIC, RADIOACTIVE TRACER, POLYCRYSTAL

CONTROL MARKING--NO RESTRICTIONS

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STEP NO---UR/0126/70/029/004/0803/0806

CIRC ACCESSION NO--APO129169

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APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R001401410003-7"

2/2 018
CIRC ACCESSION NO--APO129169
ASSTRACT/EXTRACT--(U) GP-O- ABSTRACT. THE THREE DIMENSIONAL AND INTERCRYSTALLITE (TWO DIMENSIONAL OR HOUNDARY) DIFFUSION OF AS IN POLYCRYSTALLINE CU WAS STUDIED BY A RADIOISOTOPE METHUD (LAYER BY LAYER ANALYSIS). THE THREE DIMENSIONAL DIFFUSION EQUATION FOR THE RANGE THE INTERCRYSTALLITE DIFFUSION OBEYED THE RELATION DELTA DEQUALS 7.9 TIMES 10 PRIME NEGATIVE10 EXPINEGATIVE 12 3500RT) CM PRIME3-S, WHERE DELTA HAS THE WIDTH OF THE BOUNDARY LAYER.

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APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R001401410003-7"

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INTERSECTORIAL BALANCE FOR 1970-75 DISCUSSED	Acticle by V. Morey, deputy department head, USSR Coopien, N. Pargabilization cutdopartment head, USSR Goopien, and P. Kichaog, sector chief, Scientific Scaefarb Economics Institute, USSR Coffini, Moscow, Plantwove Micrywakro, Russian, Ro 2, February 1972, pp 64-69. The twenty-fourth confront of the CPSU mased the Curtor improvement of planting we are of the deputy foctors in the successful impresentation of the nitth Cive-yest plants checking and as an important free in the field alized for the first field alized for the field food as an important free in the sections of the nitth check to the confidence of the field in this great and the field alized for the field food as an important free in the manufacture of mathematical-economic settleds and when the compacting equipment.	the interestorial balence organic fe one such mothod, It represents the logical extension and development of the rational occumic balance and affords awaitemer excellations of the intrividual sections of the plant, topether with a more thorough mally also of the intrinsic enemy's structural inter- relations. With the use of electronic computing equipment, it also enables availtiveriant primaring calculations to be made if a short pasce of time, providing a bears for enable the contractions and therefore a substantially sunner four-articular planting planting decisions and therefore a substantially	Considerable with on organization and methods is in progress at Considerable with on organization and methods is in progress at into planting with a wiew to introducing the interactual interior interio	-1			

Crystals & Semiconductors

USSR

BERZINYA, R. P., KLOTYN'SH, E. E. et al (Physicoenergy Institute of the Latvian Academy of Sciences)

"Silicon Surface Layer Investigation After RF Glow Discharge Treatment"

Riga, Izvestiya Akademii Nauk Latviyskoy SSR: Seriya Fizicheskikh i Tekhnicheskikh Nauk, May-June 1973, pp 25-28

Abstract: Silicon with an electron concentration of $4.8\cdot10^{13}$ cm⁻³ was etched by an rf glow discharge. The depth of the rf glow discharge treatment was studied by surface recombination rate measurements with subsequent layer removal.

There were silicon samples in which the surface recombination rate increased or decreased after the rf glow discharge treatment. For the first samples the depth of the layer with the modified surface recombination rate was several microns. The thickness of the modified layer increased when the samples were coated with copper before the rf glow discharge treatment.

The article includes two tables. There are four bibliographic references.

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USSR

UDC: 537.311.33

DREYMANIS, E. A., KLOTYN'SH. E. E., PETROV, V. K., Power Engineering Physics Institute, Academy of Sciences of the Latvian SSR

"The Faraday Effect in N-Type Gallium Arsenide in the Region of Intermediate Doping"

Riga, Izvestiya Akademii Nauk Latviyskoy SSR, Seriya Fizicheskikh i Tekhni-cheskikh Nauk, No 5, 1972, pp 25-31

Abstract: An investigation was made of moderately heavily doped N-type gallium arsenide with a gradual reduction in the Fermi level by introducing copper as an impurity to act as an acceptor in compensating the initial donors. Measurements were made of the Hall effect, the transverse Nernst-Ettingshausen effect, the differential thermoelectromotive force and the Faraday effect on free carriers at 90-480 kelvins. It is shown that the measure of distortions of the conduction band must be considerable in gallium arsenide over a broad range of charge carrier concentrations. It is shown that when the Fermi level is lowered sufficiently by compensation, the effective mass of electrons depends on the degree of doping, i. e. on the overall concentration of impurity ions.

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APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R001401410003-7"

USSR

UDO 621.315.592

KLOTYN'SH, E.E. (Physics-Power Institute [Fiziko-energeticheskiy institut], -AS, Latvian SSR)

"Determination Of Activation Energy In Extrinsic Semiconductor By Hall Effect Measurements"

Izv. Akademii Nauk Latviyskoy SSR: Seriya fizicheskikh i tekanicheskikh nauk (Bulletin Of The Academy Of Sciences, Latvian SSR: Physics And Technical Sciences Series), No 4, 1972, pp 60-70

Abstract: The problem of locating one impurity level in an extrinsic semi-conductor by measurements of the Hall effect for any arbitrary degeneracy is solved in the general case. Simple analytical expressions for the activation energy of an impurity level and criteria for the applicability of these expressions are found in a number of special cases. Received, 3 Jan 1971. 5 ref. 1 ill.

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APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R001401410003-7"

UDC 621.391:519.2

KLOVSKIY, D. D., SAMUSENKO, I. M.

"Problems of the Theory of Bimodal Signal Amplitude Distributions"

Radioelektronika v nar. kh-ve SSSR. Ch.1 — V sb. (Radio Electronics in the National Economy of the USSR. Part 1 — collection of works), Kuybyshev, 1970, pp 132-139 (from RZh-Radiotekhnika, No 4, Apr 71, Abstract No 4A96)

Translation: The bimodal amplitude distribution of a signal has been detected experimentally more than once in real radio channels with randomly varying parameters. In some papers bimodality is connected with the existence of a duplex, discontinuous variable nature of propagation of radio waves in the channel.

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APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R001401410003-7"

UDC 621.391:519.2

YESIPOV, B. A., KLOVSKIY, D. D.

"Problems of Conjunction of the Theory of Optimal Reception and Signal Synthesis"

Radioelektronika v nar. kh-ve SSSR. Ch.1 -- V sb. (Radio Electronics in the National Economy of the USSR. Part 1 -- collection of works), Kuybyshev, 1970, pp 81-90 (from RZh-Radiotekhnika, No 4, Apr 71, Abstract No 4A77)

Translation: The possibility of simultaneous optimization of the signal transmission and reception operations by selecting the shape of the emitted signals is investigated. A method of combining the operations of transmission and reception for random signals is demonstrated. There is I illustration and a 2-entry bibliography.

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UDC 621.391:519.2

BOCHKAREV, V. A., KLOVSKIY, D. D.

"Optimal Reception and Potential Noiseproofness in a Multiple Wave Channel with Dispersion and Doppler Shifts"

Radioelektronika v nar. kh-ve SSSR. Ch.1 -- V sh. (Radio Electronics in the National Economy of the USSR. Part 1 -- collection of works), Kuybyshev, 1970, pp 53-65 (from RZh-Radiotekhnika, No 4, Apr 71, Abstract No 4A60)

Translation: An algorithm is constructed for optimal signal processing in a multiple wave generalized gaussian channel with dispersion and doppler shifts in each wave. The noiseproofness of the algorithm obtained is investigated as applied to binary signals. A comparison is made with noiseproofness in the presence of nonoptimal incoherent reception. It is demonstrated that here, in a single wave channel with dispersion the energy loss by comparison with optimal reception does not exceed 10 decibels. There is I illustration and a

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APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R001401410003-7"

UDC 621.391.1:519.2:621.372.54

KLOVSKIY, D. D., KORABLIN, M. A.

"A Method for Detecting Recurrent Radio Signals under Conditions of a Priori

Radioelektronika v nar. kh-ve SSSR. Ch.1 — V sb. (Radio Electronics in the National Economy of the USSR. Part 1 — collection of works), Kuybyshev, 1970, pp 14-27 (from RZh-Radiotekhnika, No 4, Apr 71, Abstract No 4A38)

Translation: This article contains a discussion of a method of synthesizing a device for synchronous detection of recurring radio signals optimal in the sense of Bayes risk for unknown a priori probability densities of the individual signal parameters. A detection algorithm is constructed. The lower bound of the probability of correct detection is determined. There are 3 entries in the bibliography.

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USSR

UDC: 621.391:519.2

KLOVSKIY, D. D., SOYFER, V. A.

"Differentiating Two Orthogonal Signals in a Ceneralized Radio Channel"

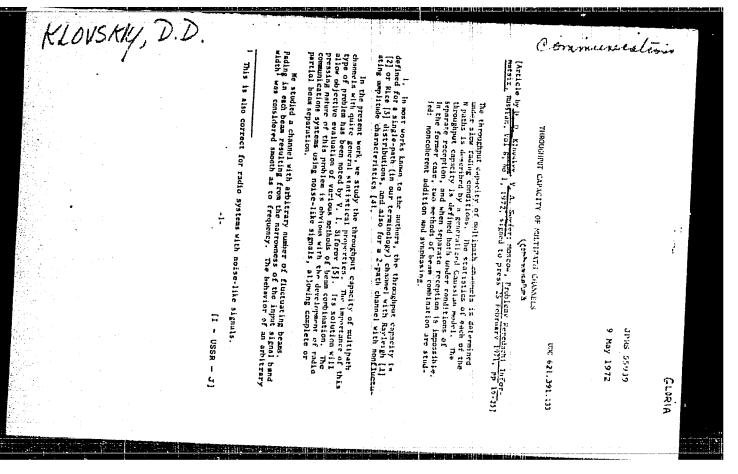
Tr. uchben. in-tov svyazi. M-vo svyazi SSSR (Works of Educational Institutes of Communications. Ministry of Communications of the USSR), 1970, vyp. 48, pp 48-53 (from RZh-Radiotekhnika, No 2, Feb 71, Abstract No 2A70)

Translation: Analytical expressions are found for the probability of error in optimum reception with respect to the criterion of the plausibility ratio. An investigation is made of the effect of random channel characteristics on interference stability. Resume.

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"APPROVED FOR RELEASE: 09/17/2001

CIA-RDP86-00513R001401410003-7



Public Health, Hygiene and Sanitation

USSR

KIOYZNER, I., Chief, Industrial Hygiene Department, Oblast Sanitary Epidemiological Station, Kostroma

"Clean Air in Workshops"

Moscow, Sotsialisticheskaya Industriya, 10 Oct 70, p 3

Translation: In 1961, the Flax Linen Combine imeni V. I. Lenin was the first in the country to reorganize the production of linen fabrics in such a way that, according to the data available, air pollution in workshops has been reduced by a factor of 2-4. Installation of automatic labric bleaching and treatment lines, boiling without rewinding, level bleachers, and new spinning machines with rings have improved the microclimate in production rooms, reduced the frequency of thread tearing, and eliminated a number of dust-producing processes.

Thus, progress in technology is going hand in hand with progress in labor hygiene. This has improved the workers' health, shortened the work day, and improved working conditions. During the last 10 years, the frequency of diseases involving temporary disability has decreased 29% in the oblast's tex1/4

KLOYZNER, I., Sotsialisticheskaya Industriya, 10 Oct 70, p 3

However, all this is not enough. A study of working conditions of the textile workers performed by the oblast Sanitary Epidemiological Station has revealed that the technology of linen production is associated with a high level of noise, dust concentration in the air, bacterial contamination of facilities, and nervous, psychological, and visual tension. This explains why textile workers are ill more frequently than workers in other branches of industry.

The sanitary service has detected an especially high dust concentration during removal of refuse and cleaning of machines and combings; this is the cause of respiratory diseases.

Unfortunately, the Upper Volga Administration of the Flax Linen Industry and the Ministry of Light Industry RSFSR are not taking the necessary measures to introduce pneumatic or pneumomechanical removal of refuse and combings and to set up vacuum suction installations to clean the equipment and facilities. Combing workers are spending up to 43% and straightening workers up to 30-51% of their work time for these jobs.

Introduction of pneumatic removal of refuse in one of the 'Krasnaya Tekstil'shehitsa' Flax Combine's workshops has reduced dust concentration in 2/4

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